

AMENDMENTS TO THE CLAIMS

This listing of claims will replace the prior version of claims in the application:

Listing of Claims:

Claim 1. (Original) A process for the preparation of a carboxylic acid salt by dehydrogenation of a primary alcohol, the process comprising:

contacting an alkaline mixture comprising said primary alcohol with a dehydrogenation catalyst, said catalyst comprising a copper-containing active phase at the surface thereof and a supporting structure that is resistant to deformation under the conditions of the dehydrogenation reaction.

Claim 2. (Original) A process as set forth in claim 1 wherein said supporting structure comprises a non-brittle material that has a yield strength of at least about 100 MPa.

Claim 3. (Original) A process as set forth in claim 2 wherein said supporting structure comprises a metal sponge containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

Claim 4. (Original) A process as set forth in claim 2 wherein the active phase at the surface of said catalyst comprises at least about 50% by weight copper.

Claim 5. (Previously presented) A process as set forth in claim 4 wherein said active phase comprises less than about 1% by weight of a metal oxide other than cuprous oxide.

Claim 6. (Previously presented) A process as set forth in claim 4 wherein said active phase comprises less than about 1% by weight of cuprous oxide.

Claim 7. (Previously presented) A process as set forth in claim 4 wherein said active phase comprises at least about 1% by weight of a supplemental metal selected from the group consisting of chromium, titanium, niobium, tantalum, zirconium, vanadium, molybdenum, manganese, tungsten, cobalt, nickel, bismuth, tin, antimony, lead, germanium, and mixtures thereof.

Claim 8. (Previously presented) A process as set forth in claim 2 wherein said supporting structure comprises a metal and contains at least about 10% by weight non-copper metal.

Claim 9. (Original) A process as set forth in claim 8 wherein said catalyst comprises a metal sponge.

Claim 10. (Original) A process according to claim 8, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

Claim 11. (Previously presented) A process according to claim 8, wherein said metal support comprises at least about 10% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

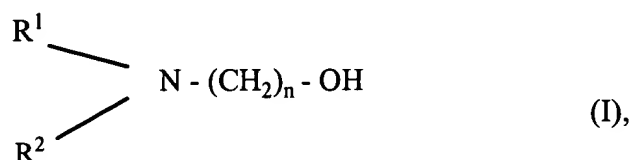
Claim 12. (Original) A process as set forth in claim 8 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about

0.005 and about 0.5 grams of copper per gram of said supporting structure.

Claim 13. (Original) A process as set forth in claim 8 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 14. (Previously presented) A process as set forth in claim 8 wherein said catalyst comprises a particulate catalyst.

Claim 15. (Original) A process according to claim 8, wherein said primary alcohol comprises a compound corresponding to the formula:



wherein n is an integer ranging from 2 to 20; and R¹ and R² are independently hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 16. (Previously presented) A process according to claim 15, wherein said carboxylic acid salt comprises an alkali metal salt of (a) iminodiacetic acid, (b) glycine, or (c) an N-alkyl-glycine.

Claim 17. (Previously presented) A process according to claim 16, wherein said process further comprises phosphonomethylating said carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt thereof.

Claim 18. (Previously presented) A process according to claim 17, wherein said process further comprises oxidizing said N-(phosphonomethyl)iminodiacetic acid or a salt thereof to N-(phosphonomethyl)glycine or a salt thereof.

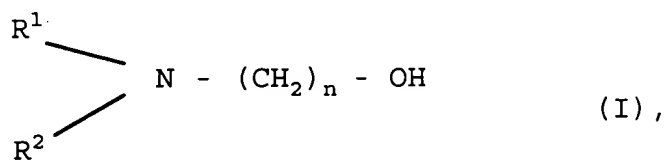
Claim 19. (Original) A process as set forth in claim 2 wherein the catalyst comprises a metal sponge and said supporting structure comprises at least about 10% by weight non-copper metal and from about 2% to about 30% by weight copper.

Claim 20. (Original) A process as set forth in claim 19 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

Claim 21. (Original) A process as set forth in claim 19 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 22. (Previously presented) A process as set forth in claim 19 wherein said catalyst comprises a particulate catalyst.

Claim 23. (Original) A process according to claim 19, wherein said primary alcohol comprises a compound corresponding to the formula:



wherein n is an integer ranging from 2 to 20; and R¹ and R² are independently hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 24. (Original) A process according to claim 23, wherein R¹ and R² are independently hydrogen; $-(CH_2)_x-(CH_3)_m$, x being an integer ranging from 0 to about 19, m being either 1 or 2; $-(CH_2)_y-OH$, y being an integer ranging from 1 to about 20; $(CH_2)_z-COOH$, z being an integer ranging from 1 to about 19; or phosphonomethyl.

Claim 25. (Currently amended) A process according to claim [[24]] 23, wherein n is 2; R¹ is hydrogen; and R² is hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 26. (Original) A process according to claim 25, wherein R² is hydrocarbyl.

Claim 27. (Currently amended) A process according to claim 26, wherein R² is $-(CH_2)_x-(CH_3)_m$, x being an integer ranging from 0 to about 19, m being either 1 or 2.

Claim 28. (Original) A process according to claim 27, wherein R² is $-CH_3$.

Claim 29. (Original) A process according to claim 23, wherein said primary alcohol is selected from the group consisting of monoethanolamine, diethanolamine, and triethanolamine.

Claim 30. (Previously presented) A process according to claim 29, wherein said process further comprises

phosphonomethylating said carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt thereof.

Claim 31. (Original) A process according to claim 30, wherein said process further comprises oxidizing said N-(phosphonomethyl)iminodiacetic acid to N-(phosphonomethyl)glycine or a salt thereof.

Claim 32. (Previously presented) A process as set forth in claim 19, wherein the supporting structure of said metal sponge comprises at least about 65% by weight non-copper metal.

Claim 33. (Original) A process according to claim 32, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

Claim 34. (Previously presented) A process according to claim 33, wherein said supporting structure comprises at least about 65% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 35. (Previously presented) A process according to claim 34, wherein said supporting structure comprises at least about 65% nickel.

Claim 36. (Previously presented) A process according to claim 34, wherein said supporting structure comprises at least about 65% cobalt.

Claim 37. (Original) A process as set forth in claim 2 wherein said catalyst has a homogeneous structure containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

Claim 38. (Original) A process as set forth in claim 2 wherein said catalyst comprises a monophasic alloy containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

Claim 39. (Original) A process as set forth in claim 2 wherein said catalyst has a heterogeneous structure comprising a support comprising a metal containing at least about 10% by weight non-copper metal and a surface active phase containing at least about 50% by weight copper.

Claim 40. (Original) A process as set forth in claim 2 wherein said supporting structure comprises a metal sponge containing at least about 15% by weight non-copper metal and at least about 10% by weight copper.

Claim 41. (Original) A process as set forth in claim 2 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

Claim 42. (Original) A process as set forth in claim 2 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 43. (Original) A process as set forth in claim 42 wherein said outer stratum is deposited by a method comprising electrochemical displacement reaction between a metal of said support and copper ions.

Claim 44. (Original) A process as set forth in claim 42 wherein said outer stratum is deposited by a method comprising electroless plating of copper metal on said metal sponge support.

Claim 45. (Original) A process as set forth in claim 2 wherein said catalyst comprises a particulate catalyst.

Claim 46. (Original) A process according to claim 2, wherein said process further comprises phosphonomethylating said carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt thereof.

Claim 47. (Original) A process according to claim 46, wherein said process further comprises oxidizing said N-(phosphonomethyl)iminodiacetic acid to N-(phosphonomethyl)glycine or a salt thereof.

Claim 48. (Original) A process according to claim 2, wherein said process further comprises collecting the hydrogen produced by the dehydrogenation reaction and transferring said hydrogen to a fuel cell for the production of electric power.

Claim 49. (Previously presented) A process for the preparation of a carboxylic acid salt by dehydrogenation of a primary alcohol, the process comprising:

contacting an alkaline mixture comprising said primary alcohol with a dehydrogenation catalyst, said catalyst comprising a metal sponge comprising a copper-containing active phase at the surface thereof and a supporting structure that comprises at least about 10% by weight non-copper metal.

Claim 50. (Original) A process as set forth in claim 49 wherein the copper content of said surface active phase exceeds the copper content of said supporting structure.

Claim 51. (Previously presented) A process as set forth in claim 50 wherein said surface active phase comprises at least about 50% by weight copper and said supporting structure comprises at least about 15% by weight non-copper metal.

Claim 52. (Previously presented) A process as set forth in claim 50 wherein said supporting structure comprises between about 2% and about 30% by weight copper.

Claim 53. (Original) A process according to claim 52, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

Claim 54. (Previously presented) A process according to claim 52, wherein said metal support comprises at least about 10% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 55. (Original) A process as set forth in claim 52 wherein said catalyst comprises a surface stratum comprising

said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

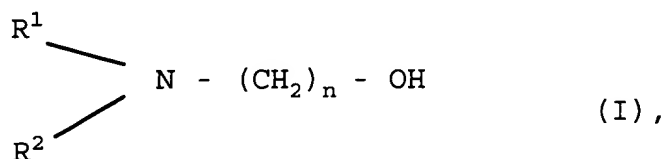
Claim 56. (Original) A process as set forth in claim 52 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 57. (Original) A process as set forth in claim 56 wherein said outer stratum is deposited by a method comprising electrochemical displacement reaction between a metal of said support and copper ions.

Claim 58. (Original) A process as set forth in claim 56 wherein said outer stratum is deposited by a method comprising electroless plating of copper metal on said metal sponge support.

Claim 59. (Original) A process as set forth in claim 52 wherein said catalyst comprises a particulate catalyst.

Claim 60. (Original) A process according to claim 52, wherein said primary alcohol comprises a compound corresponding to the formula:



wherein n is an integer ranging from 2 to 20; and R¹ and R² are independently hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 61. (Original) A process according to claim 60, wherein R^1 and R^2 are independently hydrogen; $-(CH_2)_x-(CH_3)_m$, x being an integer ranging from 0 to about 19, m being either 1 or 2; $-(CH_2)_y-OH$, y being an integer ranging from 1 to about 20; $(CH_2)_z-COOH$, z being an integer ranging from 1 to about 19; or phosphonomethyl.

Claim 62. (Currently amended) A process according to claim [[61]] 60, wherein n is 2; R^1 is hydrogen; and R^2 is hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 63. (Original) A process according to claim 62, wherein R^2 is hydrocarbyl.

Claim 64. (Currently amended) A process according to claim 63, wherein R^2 is $-(CH_2)_x-(CH_3)_m$, x being an integer ranging from 0 to about 19, m being either 1 or 2.

Claim 65. (Original) A process according to claim 64, wherein R^2 is $-CH_3$.

Claim 66. (Original) A process according to claim [[65]] 60, wherein said primary alcohol is selected from the group consisting of monoethanolamine, diethanolamine, and triethanolamine.

Claim 67. (Original) A process as set forth in claim 50 wherein said catalyst has a homogeneous structure containing at least about 10% by weight non-copper metal and at least about 15% by weight copper.

Claim 68. (Original) A process as set forth in claim 50 wherein said catalyst comprises a monophasic alloy containing at least about 10% by weight non-copper metal and at least about 15% by weight copper.

Claim 69. (Original) A process as set forth in claim 50 wherein said catalyst comprises a surface stratum comprising said active phase, said surface stratum containing between about 0.005 and about 0.5 grams of copper per gram of said supporting structure.

Claim 70. (Original) A process as set forth in claim 50 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 71. (Original) A process as set forth in claim 70 wherein said outer stratum is deposited by a method comprising electrochemical displacement reaction between a metal of said support and copper ions.

Claim 72. (Original) A process as set forth in claim 70 wherein said outer stratum is deposited by a method comprising electroless plating of copper metal on said metal sponge support.

Claim 73. (Original) A process as set forth in claim 50 wherein said catalyst comprises a particulate catalyst.

Claim 74. (Original) A process according to claim 50, wherein said process further comprises phosphonomethylating said

carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt thereof.

Claim 75. (Original) A process according to claim 74, wherein said process further comprises oxidizing said N-(phosphonomethyl)iminodiacetic acid to N-(phosphonomethyl)glycine or a salt thereof.

Claim 76. (Original) A process according to claim 50, wherein said process further comprises collecting the hydrogen produced by the dehydrogenation reaction and transferring said hydrogen to a fuel cell for the production of electric power.

Claims 77-92. (Cancelled)

Claim 93. (Previously presented) A process for making a salt of a carboxylic acid, the process comprising contacting a catalyst with an alkaline mixture comprising a primary alcohol, wherein:

said catalyst is characterized as being formed by a process comprising depositing a copper-containing active phase on the surface of a metal sponge support, said metal sponge support comprising at least about 65% by weight of a non-copper metal and about 2% to about 30% by weight copper.

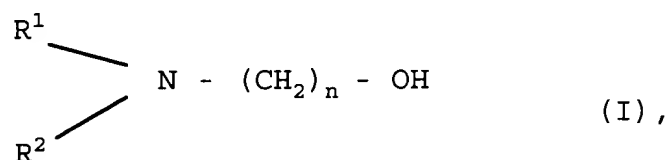
Claim 94. (Original) A process according to claim 93, wherein said catalyst comprises a surface stratum comprising said copper-containing active phase, said surface stratum containing between about 0.005 to about 0.5 grams of copper per gram of said metal sponge support.

Claim 95. (Original) A process as set forth in claim 93 wherein said catalyst has a copper-containing outer stratum deposited thereon.

Claim 96. (Original) A process according to claim 95, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

Claim 97. (Original) A process according to claim 95, wherein said copper-containing outer stratum is deposited by a method comprising electrochemical displacement reaction between a metal of said support and copper ions.

Claim 98. (Original) A process according to claim 93, wherein said primary alcohol comprises a compound corresponding to the formula:



wherein n is an integer ranging from 2 to 20; and R¹ and R² are independently hydrogen, hydrocarbyl, or substituted hydrocarbyl.

Claim 99. (Original) A process according to claim 93, wherein said carboxylic acid salt comprises an alkali metal salt of (a) iminodiacetic acid, (b) glycine, or (c) an N-alkyl-glycine.

Claim 100. (Original) A process according to claim 93, wherein said process further comprises phosphonomethylating said

carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt thereof.

Claim 101. (Original) A process according to claim 100, wherein said process further comprises oxidizing said N-(phosphonomethyl)iminodiacetic acid to N-(phosphonomethyl)glycine or a salt thereof.

Claims 102-168. (Canceled)

Claim 169. (Previously presented) A process as set forth in claim 8, wherein the supporting structure comprises at least about 65% by weight non-copper metal.

Claim 170. (Previously presented) A process according to claim 169, wherein said non-copper metal comprises metal having a reduction potential which is less than about +343 mVolts vs. NHE.

Claim 171. (Previously presented) A process according to claim 170, wherein said supporting structure comprises at least about 65% by weight of a non-copper metal selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 172. (Previously presented) A process according to claim 171, wherein said supporting structure comprises at least about 65% nickel.

Claim 173. (Previously presented) A process according to claim 171, wherein said supporting structure comprises at least about 65% cobalt.

Claim 174. (Previously presented) A process as set forth in claim 8, wherein the supporting structure comprises at least about 80% by weight non-copper metal.

Claim 175. (Previously presented) A process as set forth in claim 8, wherein the supporting structure comprises at least about 85% by weight non-copper metal.

Claim 176. (Previously presented) A process as set forth in claim 8, wherein the supporting structure comprises at least about 90% by weight non-copper metal.

Claim 177. (Previously presented) A process as set forth in claim 176, wherein the non-copper metal is cobalt.

Claim 178. (Previously presented) A process as set forth in claim 3 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 179. (Previously presented) A process as set forth in claim 178 wherein said non-copper metal is cobalt.

Claim 180. (Previously presented) A process as set forth in claim 7 wherein said supplemental metal is molybdenum.

Claim 181. (Previously presented) A process as set forth in claim 11 wherein said non-copper metal is cobalt.

Claim 182. (Previously presented) A process as set forth in claim 19 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 183. (Previously presented) A process as set forth in claim 182 wherein said non-copper metal is cobalt.

Claim 184. (Previously presented) A process as set forth in claim 37 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 185. (Previously presented) A process as set forth in claim 184 wherein said non-copper metal is cobalt.

Claim 186. (Previously presented) A process as set forth in claim 38 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 187. (Previously presented) A process as set forth in claim 186 wherein said non-copper metal is cobalt.

Claim 188. (Previously presented) A process as set forth in claim 39 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 189. (Previously presented) A process as set forth in claim 188 wherein said non-copper metal is cobalt.

Claim 190. (Previously presented) A process as set forth in claim 39 wherein said active phase further comprises at least about 1% by weight of a supplemental metal selected from the group consisting of chromium, titanium, niobium, tantalum, zirconium, vanadium, molybdenum, manganese, tungsten, cobalt, nickel, bismuth, tin, antimony, lead, germanium, and mixtures thereof.

Claim 191. (Previously presented) A process as set forth in claim 190 wherein said supplemental metal is molybdenum.

Claim 192. (Previously presented) A process as set forth in claim 40 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 193. (Previously presented) A process as set forth in claim 192 wherein said non-copper metal is cobalt.

Claim 194. (Previously presented) A process as set forth in claim 49 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 195. (Previously presented) A process as set forth in claim 194 wherein non-copper metal is cobalt.

Claim 196. (Previously presented) A process as set forth in claim 49 wherein said active phase further comprises at least about 1% by weight of a supplemental metal selected from the group consisting of chromium, titanium, niobium, tantalum, zirconium, vanadium, molybdenum, manganese, tungsten, cobalt, nickel, bismuth, tin, antimony, lead, germanium, and mixtures thereof.

Claim 197. (Previously presented) A process as set forth in claim 196 wherein said supplemental metal is molybdenum.

Claim 198. (Previously presented) A process as set forth in claim 51 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 199. (Previously presented) A process as set forth in claim 198 wherein said non-copper metal is cobalt.

Claim 200. (Previously presented) A process as set forth in claim 54 wherein said non-copper metal is cobalt.

Claim 201. (Previously presented) A process as set forth in claim 67 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 202. (Previously presented) A process as set forth in claim 201 wherein said non-copper metal is cobalt.

Claim 203. (Previously presented) A process as set forth in claim 68 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 204. (Previously presented) A process as set forth in claim 203 wherein said non-copper metal is cobalt.

Claim 205. (Previously presented) A process as set forth in claim 204 wherein said catalyst comprises a metal sponge support having deposited thereon a copper-containing outer stratum.

Claim 206. (Previously presented) A process as set forth in claim 205 wherein said outer stratum is deposited by a method comprising electrochemical displacement reaction between a metal of said support and copper ions.

Claim 207. (Previously presented) A process as set forth in claim 206 wherein said outer stratum is deposited by a method comprising electroless plating of copper metal on said metal sponge support.

Claim 208. (Previously presented) A process as set forth in claim 93 wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 209. (Previously presented) A process as set forth in claim 208 wherein said non-copper metal is cobalt.

Claim 210. (Previously presented) A process according to claim 174, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 211. (Previously presented) A process according to claim 210, wherein said non-copper metal is cobalt.

Claim 212. (Previously presented) A process according to claim 175, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 213. (Previously presented) A process according to claim 212, wherein said non-copper metal is cobalt.

Claim 214. (Previously presented) A process according to claim 176, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 215. (Previously presented) A process according to claim 214, wherein said non-copper metal is cobalt.

Claim 216. (Previously presented) A process as set forth in claim 2 wherein said supporting structure comprises a metal sponge containing at least about 50% by weight non-copper metal and at least about 10% by weight copper.

Claim 217. (Previously presented) A process according to claim 216, wherein said non-copper metal is selected from the

group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 218. (Previously presented) A process according to claim 217, wherein said non-copper metal is cobalt.

Claim 219. (Previously presented) A process as set forth in claim 19 wherein the catalyst comprises a metal sponge and said supporting structure comprises at least about 80% by weight non-copper metal.

Claim 220. (Previously presented) A process according to claim 219, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 221. (Previously presented) A process according to claim 220, wherein said non-copper metal is cobalt.

Claim 222. (Previously presented) A process as set forth in claim 19 wherein the catalyst comprises a metal sponge and said supporting structure comprises at least about 85% by weight non-copper metal.

Claim 223. (Previously presented) A process according to claim 222, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 224. (Previously presented) A process according to claim 223, wherein said non-copper metal is cobalt.

Claim 225. (Previously presented) A process as set forth in claim 19 wherein the catalyst comprises a metal sponge and said supporting structure comprises at least about 90% by weight non-copper metal.

Claim 226. (Previously presented) A process according to claim 225, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 227. (Previously presented) A process according to claim 226, wherein said non-copper metal is cobalt.

Claim 228. (Previously presented) A process as set forth in claim 49 wherein said supporting structure comprises at least about 50% by weight non-copper metal.

Claim 229. (Previously presented) A process according to claim 228, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 230. (Previously presented) A process according to claim 229, wherein said non-copper metal is cobalt.

Claim 231. (Previously presented) A process as set forth in claim 49 wherein said supporting structure comprises at least about 65% by weight non-copper metal.

Claim 232. (Previously presented) A process according to claim 231, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 233. (Previously presented) A process according to claim 232, wherein said non-copper metal is cobalt.

Claim 234. (Previously presented) A process as set forth in claim 49 wherein said supporting structure that comprises at least about 80% by weight non-copper metal.

Claim 235. (Previously presented) A process according to claim 234, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 236. (Previously presented) A process according to claim 235, wherein said non-copper metal is cobalt.

Claim 237. (Previously presented) A process as set forth in claim 49 wherein said supporting structure comprises at least about 85% by weight non-copper metal.

Claim 238. (Previously presented) A process according to claim 237, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 239. (Previously presented) A process according to claim 238, wherein said non-copper metal is cobalt.

Claim 240. (Previously presented) A process as set forth in claim 49 wherein said supporting structure comprises at least about 90% by weight non-copper metal.

Claim 241. (Previously presented) A process according to claim 240, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 242. (Previously presented) A process according to claim 241, wherein said non-copper metal is cobalt.

Claim 243. (Previously presented) A process as set forth in claim 93 wherein said metal sponge support comprises at least about 80% by weight of a non-copper metal.

Claim 244. (Previously presented) A process according to claim 243, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 245. (Previously presented) A process according to claim 244, wherein said non-copper metal is cobalt.

Claim 246. (Previously presented) A process as set forth in claim 93 wherein said metal sponge support comprises at least about 85% by weight of a non-copper metal.

Claim 247. (Previously presented) A process according to claim 246, wherein said non-copper metal is selected from the

group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 248. (Previously presented) A process according to claim 247, wherein said non-copper metal is cobalt.

Claim 249. (Previously presented) A process as set forth in claim 93 wherein said metal sponge support comprising at least about 90% by weight of a non-copper metal.

Claim 250. (Previously presented) A process according to claim 249, wherein said non-copper metal is selected from the group consisting of nickel, zinc, tin, cobalt, iron and combinations thereof.

Claim 251. (Previously presented) A process according to claim 250, wherein said non-copper metal is cobalt.